

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given by telephone by Franco A. Serafini on April 22, 2010.

The application has been amended as follows: Previously currently amended claim 28 is amended to recite a non-transitory program storage device. If applicants have questions or problems with the amendment they may reach examiner at the telephone number provided below.

IN THE CLAIMS:

Claim 28 has been amended as follows:

28. (Currently Amended) A non-transitory program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for processing a set of input data, the method step comprising:

providing a plurality of nodes forming at least two layers,

Art Unit: 2129

a first such layer being an input layer and a last such layer being an output layer, said input layer nodes and said output layer nodes being communicably connected;

inputting input data from a database to said input layer, and outputting the results of processing said data from the output layer, the output layer nodes forming output channels;

wherein each node of the output layer outputs a transformation into output data of the input data ~~that it has~~ received from the input layer, said transformation comprising:

a first transformation step comprising at least one sub-step consisting in summing the input data received from the input nodes to ~~the~~ said output nodes by weighting the said input data, and

a second transformation step which nonlinearly transforms the results of the first transformation step,

wherein in each output node said first transformation step comprises two sub-steps:

a first sub-step being a nonlinear transformation function of the input data received by the output nodes from the input nodes, and

the second sub-step being said summing step of the said input data which has been nonlinearly transformed in the said first sub-step.

Reasons For Allowance

2. The following is an examiner's statement of reasons for allowance: claims 13-28 are considered allowable since when reading the claims in light of the specification, as per MPEP §2111.01 or *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999), none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims, specifically wherein each node of the output layer outputs a transformation into output data of the input data received from the input layer, said transformation comprising: a first transformation step comprising at least one sub-step summing the input data received from the input nodes to said output nodes by weighing the said input data, and a second transformation step which nonlinearly transforms the results of the first transformation step, wherein in each output node said first transformation step comprises two substeps: a first sub-step being a nonlinear transformation function of the input data received by the output nodes from the input nodes, as disclosed in independent claims 13 and 28 of the instant application.

Art Unit: 2129

3. The above limitations find support, for example, at pg. 3-4 and 10-13 of the originally filed specification of the instant application.

4. A practical application for the invention is disclosed on page 2-3: "...evaluating the consequences of certain situations defined by certain features which are represented and coded by the data or variables of the data records of a database and on the basis of the results of this evaluation...take decisions on the applying of certain measures or actions without needing the intervention of human personal."

5. The claimed program storage device has been interpreted as being the tangible computer memory of the computer producing "the solution of the two spirals problem computed with the network according to the present invention" (as disclosed by e.g., Figure 9 and p. 27 of the specification).

6. The Prior art of reference *Fahlman et al. (Fahlman)*, "The Cascade-Correlation Learning Architecture", 1991 discloses an a neural network, comprising: a plurality of nodes forming at least two layers, a first such layer being an input layer and a last such layer being an output layer, said input layer nodes

Art Unit: 2129

and said output layer nodes being communicably connected; wherein, in operation, input data from a database is input to said input layer, and the results of processing said data are output from the output layer, the output layer nodes forming output channels; wherein each node of the output layer outputs a transformation into output data of the input data received from the input layer said transformation comprising: a first transformation step comprising at least a sub-step consisting in summing the input data received from the input nodes to the said output nodes by weighting the said input data and a second transformation step which transforms nonlinearly the results obtained by the first transformation step the output data obtained by the said transformation carried out in an output node being the output data, wherein said neural network is implemented in a computer having a processor and memory, said computer arranged to input the data from the database to the input layer, perform the summing and transformations of data at each node of the output layer and provide the output data to a user.

Fahlman also teaches a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for processing a set of input data using the neural network specified above.

Fahlman does not teach wherein each node of the output layer outputs a transformation into output data of the input data received from the input layer, said transformation comprising: a first transformation step comprising at least one sub-step summing the input data received from the input nodes to said output nodes by weighing the said input data, and a second transformation step which nonlinearly transforms the results of the first transformation step, wherein in each output node said first transformation step comprises two substeps: a first sub-step being a nonlinear transformation function of the input data received by the output nodes from the input nodes, as specified in the independent claims of the instant application.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2129

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Nathan H. Brown, Jr. who can normally be reached on M-F 1200-2000 and whose telephone number is (571) 272-8632 or supervising examiner Donald Sparks whose telephone number is (571) 272-4201.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks,
Washington, D. C. 20231;

Hand delivered to:

Receptionist,
Customer Service Window,
Randolph Building,
401 Dulany Street,
Alexandria, Virginia 22313,
(located on the first floor of the south side of the
Randolph Building);or

faxed to:

(571) 272-3150 (for formal communications intended for
entry.)

Art Unit: 2129

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to Private PAIR system, contact the **Electronic Business Center (EBC) at 866-217-9197** (toll free). If you would like assistance from a USPTO **Customer Service** Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or **571-272-1000**.

/Nathan H. Brown, Jr./

Examiner, Art Unit 2129

/Donald Sparks/

Supervisory Patent Examiner, Art Unit 2129